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(54) Joist protection in buildings

(57) A protective joist end cap shaped to fit over the end of the joist is provided in which the internal wall surfaces have spaced protrusions (2, 4) dimensioned to be a sliding fit onto the joist end, the arrangement being such that the end cap is "centred" on the latter with a space left between corresponding surfaces for free ventilation around the joist end.

Preferably, the outer side wall surfaces of the end cap are provided with protrusions or ribs (5) which provide a positive key for mortar to be applied therearound during building.

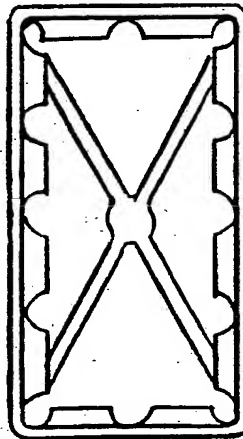
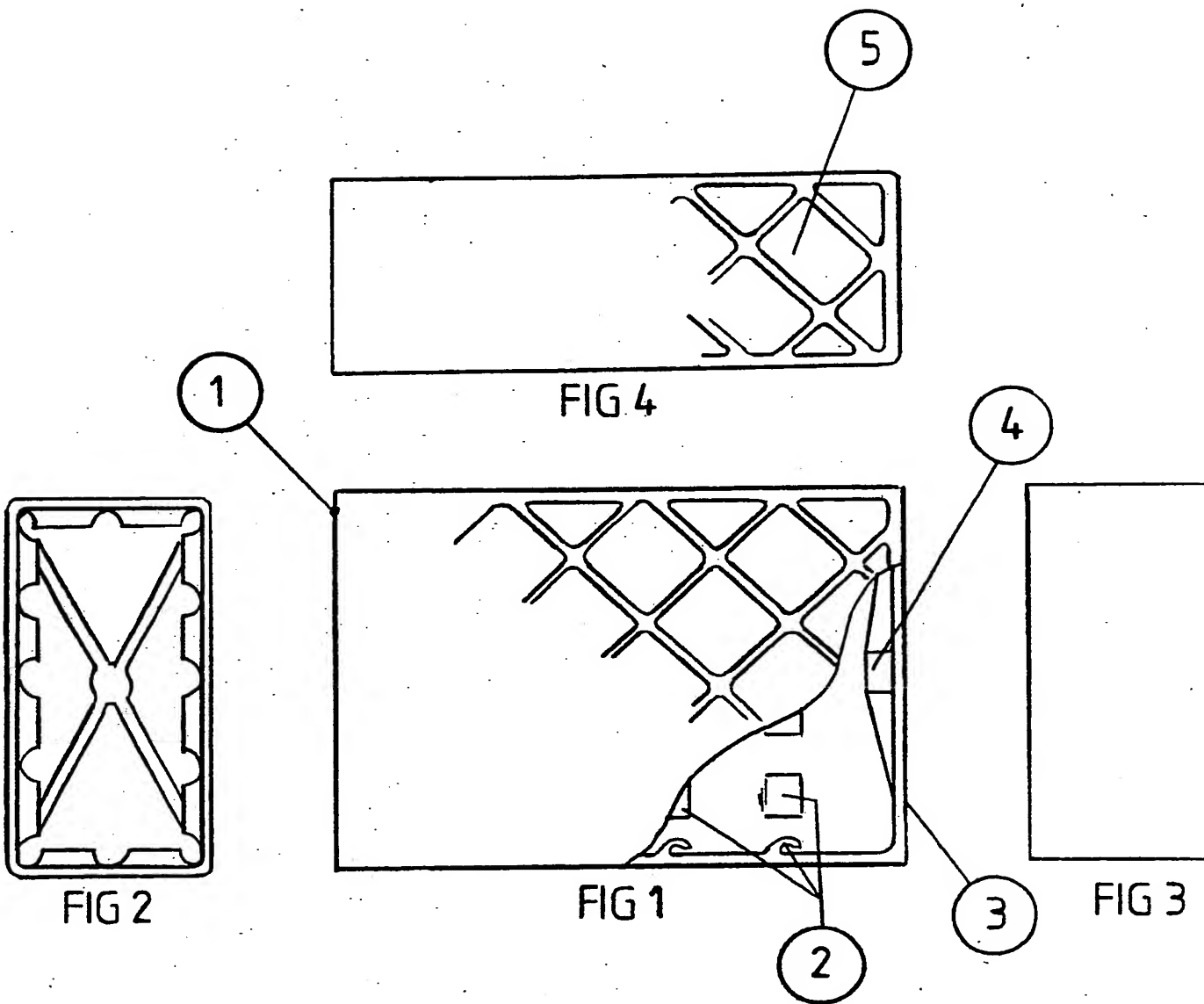


FIG 2



JOIST PROTECTION IN BUILDINGS

For many hundreds of years, timber has been used in the construction of our homes, workplaces, etc. and where-upon the well-seasoned hardwoods used in years gone by were
5 relatively resistant to decay, the now widely used softwoods tend to decay more readily.

Decay, due to wet and dry rot normally results when timber is subjected to sustained high levels of moisture, the most common cause of which is built in or is in contact with
10 damp wall structures.

Due to the fact that rising dampness rarely exceeds a height of one metre above ground level, much of the decay in latterday construction occurs in ground-floor suspended floors, particularly where the external brickwork is of a
15 solid nature (probably without or with only a partially effective damp proof course). Although dampness is normally associated with wall surfaces at ground level, it is not unknown for it to occur at higher levels, due to other defects, with similar results.

20 In an attempt to prevent timber decay at ground-floor level, the internal sleeper wall was introduced, by which the supporting timbers could then be left short of the external wall, thus preventing the subsequent attraction of the wall's moisture. This method of construction is however, unsuitable
25 for situations where the floor, for instance, spans a cellar, where supporting timbers are invariably "built in" to the external wall construction.

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A more recent innovation is the "joist-hanger" which carries the supporting timbers from the wall's surface and this method has the added advantage that it can be used at
5 almost all levels of the construction.

There is, however, no substitute for "building in" timbers for rigidity, and, quite often, speed of construction particularly in cases where timber replacements are necessary.

10 An object of my invention is to provide protection for the joists to enable them to be built in.

According to my invention, an end cap is provided the internal side wall surfaces of which are provided with spaced protrusions dimensioned to be a sliding fit onto the joist
15 end, the arrangement being such that the end cap is "centred" over the joist end with a space left between the corresponding surfaces of the joist end and end cap for free ventilation.

Preferably, the outer side wall surfaces of the end cap
20 are also formed with protrusions or ribs, e.g. in the form of a lattice, so as to provide a positive key for the mortar to be applied therearound during building.

In order that my invention may be readily understood, one embodiment will now be described with reference to the
25 accompanying drawing, in which:-

Figure 1 is a side view of the end cap partly broken away to show its interior,

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Figure 2 is a front end view,

Figure 3 is a rear end view, and

Figure 4 is a plan view,

5 Referring to the drawings, the end cap 1 is dimensioned to suit particular sizes of standard joist, e.g. 4" x 2"; 6" x 2"; 9" x 2" etc. The internal side wall surfaces of the end cap are made oversize with respect to the joist dimensions, but they are provided with inwardly projecting protrusions 2 which, between them, are a sliding fit onto the
10 joist end. The end wall 3 of the cap is provided on its internal surface with an end stop 4. Thus, an end cap can be centred over each joist end by slidingly fitting it thereon so as to leave a space around the joist end for free
15 ventilation when built-in. The outer side wall surfaces of the end cap have a lattice work of ribs 5 by which the end cap is positively keyed to the mortar when built in.

20 Preferably, the end caps are formed of plastics, e.g. by moulding, and are of a material which is non-hydroscopic and preferably has other appropriate characteristics, which include resistance against fungus and chemicals, and malleability over a range of ambient temperature to which it may be subjected. A suitable material may be P.V.C.

25 Such an end cap would be particularly advantageous not only for new constructions, but also in renovating existing buildings, as it would allow timbers to be built into damp brickwork or masonry with confidence, by preventing any contact with the surrounding surfaces.

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Where the end caps are provided for a range of different joist sizes, preferably they would be colour-coded for ease of recognition.

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CLAIMS

1. A protective joist end cap, shaped to fit over the end of a joist, wherein the internal wall surfaces are provided with spaced protrusions dimensioned to be a sliding fit onto the joist end, the arrangement being such that the end cap is "centred" over the joist end with a space left between the corresponding surfaces of the joist end and end cap for free ventilation.

2. An end cap according to Claim 1, wherein the outer side wall surfaces of the end cap are also formed with protrusions or ribs, so as to provide a positive key for mortar to be applied therearound during building.

3. An end cap according to Claim 2, wherein the outer side wall surfaces are provided with a lattice work of ribs.

4. An end cap according to any one of the preceding claims, wherein said cap is formed from plastics material which is non-hydroscopic, e.g P.V.C

5. An end cap constructed and adapted for use substantially as hereinbefore described with reference to, and as shown in, the accompanying drawing.

CLAIMS

1. A protective joist end cap, shaped to fit over the end of a joist, wherein the cap is formed from plastics material which is non-hydroscopic, e.g P.V.C, the walls of the end cap are imperforate to prevent ingress of moisture, the internal surfaces of the walls are provided with spaced protrusions dimensioned to be a sliding fit onto the joist end, whereby to "centre " the end cap over the joist end with a space left between the corresponding surfaces of the joist end and end cap for free ventilation, and wall surfaces of the end cap are also formed with protrusions or ribs, whereby to provide a positive key for mortar to be applied therearound during building.
2. An end cap according to Claim 2, wherein the outer side wall surfaces are provided with a lattice work of ribs.
3. An end cap constructed and adapted for use substantially as hereinbefore described with reference to, and as shown in, the accompanying drawing.